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Children's Development of Printed Word Knowledge in Sentence-Based Reading Approaches

Darrell Morris

In the second week of school, Ms. Baker stands before a large easel chart in her first grade classroom and leads her 23 students in choral reading a class-dictated experience story. (Note: Ms. Baker is a pseudonym for an experienced teacher whom the author worked with over the course of a school year.)

Our School

We went walking in our school.

We saw the lunch room.

We met Mr. Johnson, the principal.

Because this is the third time the class has read' this short text, most of the children chime in enthusiastically as the teacher points to each word in the story as it is read.

Later, as the children are illustrating mimeographed copies of the dictated story, Ms. Baker moves from table to table checking each child's ability to read the text. Her assessment is simple and efficient. She models a finger-point reading of the first two sentences of the story, asks the child to finger-point read the same sentences, and then asks the child to

identify one or two words within the sentences when the teacher points to them.

Adam, Betty, and Curtis are the first three children Ms. Baker assesses on this day.

- Adam finger-point reads the two sentences (in fact, all three sentences) with accuracy and confidence. When Ms. Baker points to two words in the text, he identifies them immediately, almost as if they were already in his sight vocabulary.

- Betty trips up in the first sentence, pointing to in as she says the second syllable -ing in walking. On reaching the end of the line, she recognizes her mistake and goes back to reread the sentence, this time correctly matching up the spoken words to the printed words. When Ms. Baker points to our in the first sentence and then to lunch in the second sentence, in each case Betty returns to the beginning of the line, finger-points over to the target word, and correctly identifies it. "Lunch begins with an 'L'," she proudly states.

- Curtis has difficulty with the finger-point reading task. Even given two modeled readings, he is unable to point correctly to each printed word as he recites the first two sentences. He also guesses randomly when Ms. Baker points to individual words in the two lines of print. To provide Curtis with a doable task, Ms. Baker blocks off school in the first line and points to the individual letters in the word. Curtis is able to identify the letters s and o but not c, h, or l.

Today, under the umbrella philosophy of whole language, more children than ever before are being introduced to reading through holistic, sentence-based teaching approaches — e.g., shared-book experience (Holdaway, 1979; Routman,

1988) or the dictated story approach used by Ms. Baker (Stauffer, 1970; Nessel and Jones, 1981). Such approaches offer several advantages, including meaningful stories, natural language patterns, memory support, and a communal, non-threatening context for learning.

One can appreciate the benefits of holistic teaching approaches, however, and still recognize that reading acquisition, to a large degree, involves learning to process the individual printed words on the page. Ms. Baker understands this fact. Although committed to introducing reading selections in a whole-group, meaning-centered context, she sets up "rereading" situations (see above) where she can attend closely to individual students' developing ability to read printed words in text. Through these brief observations, Ms. Baker learns that Adam has internalized a concept of word in reading and is on the verge of establishing a sight vocabulary; that Betty, while less adept than Adam, is able to use spacing between words plus beginning consonant cues to "problem-solve" her way through text; and that Curtis, at present, lacks both word consciousness in text and knowledge of some of the alphabet letters. Moreover, Ms. Baker realizes that each of these children will require different levels of instructional support if they are to move forward as readers.

Using Curtis as a case study, the present article will describe how children develop printed word knowledge when taught with a top-down, sentence-based approach. The description should be helpful to classroom teachers in diagnosing and instructing beginning readers.

Stages in word knowledge development

Stage 1: Word as a nameable object in text. Curtis is a bright-eyed, enthusiastic six-year-old who enjoys coming to school. He especially enjoys the 45-minute "reading circle"

that begins each school day. During this time, Ms. Baker leads the class of 23 children in reading aloud and discussing favorite 'big books', experience stories, and poems. In the reading circle, Curtis listens attentively and contributes willingly to the group discussion. He feels sorry for the "big, bad Wolf," worries about the "third Billy Goat Gruff," and empathizes with the animals under the care of "Mrs. Wishy-Washy." Cognitively and linguistically, Curtis is engaged and growing in the rich literacy environment provided by Ms. Baker.

Still, three weeks into first grade, Curtis can recognize only 12 lower-case letters of the alphabet. Moreover, when Ms. Baker finger-point reads a chart story or big book in front of the class, Curtis attends to the text but has little or no idea how the stream of spoken language matches to the printed words on the page. Reading text is a mystery to Curtis. The alphabet letters, many of which he does not know, just seem to blend together in a long jumbled line.

IcxxrxXxxXbxXxoXtXxtrxiX.

Over the next few weeks, Ms. Baker helps Curtis learn eight more letters of the alphabet. She also has him finger-point read a favorite big book, a dictation, and a rhyme (e.g., "Jack be nimble") each day, both with her and with a partner who can finger-point to words. One morning as Curtis is rereading the dictation, Ms. Baker notices that he is able to match the spoken words to the printed words in an accurate manner. His reading is halting but Curtis honors each word as he finger-points across the line of print. This is an important benchmark. Words, for Curtis, are not identifiable objects in text.

Curtis can point to individual words as she reads memorized texts, but whether he is attending to letter/sound cues within the words (e.g., the beginning consonant) is another

question. Ms. Baker is doubtful for several reasons. When Curtis hesitates in reading a word and the teacher points to the beginning consonant letter as a cue, this seems to be of little help to the child. In addition, Curtis' daily journal writing/drawing shows little evidence of letter/sound use. Even on a short diagnostic spelling task, he shows inconsistent awareness of the beginning sounds in words:

<u>Spelling word</u>	<u>Curtis' spelling</u>
back	R
feet	T
mail	R
step	S
pick	T
side	S

In learning that words are nameable objects in text, Curtis has made a significant advance. However, his level of word knowledge is rudimentary at best. In his mind's eye, the sentence, I can ride my bike on trails, might look like this.

I xxx xxXx xx XxXx xx XxxxXx.

Word length, word shape, or an idiosyncratic letter here and there might offer cues to word recognition, but letter/sound processing awaits further development. (Note: The x's in the example above refer to letter/sound processing, not to letter recognition. That is, Curtis may recognize a few of the alphabet letters in the line of print, but in the act of reading the sentence he is not processing or decoding these letter/sounds. (A child cannot process the letter-sound properties in a printed word [ran] unless he or she is aware, at some level, that the spoken word correlate [/ran/] is comprised of individual sounds [/r/ /a/ /n/]. This is what psychologists refer to as phonemic awareness).

Stage 2: Word as an object in text with a beginning element. By the first week of October, Curtis has learned most of

the letters of the alphabet (q, v, y, and z can wait). Daily reading and writing/drawing lessons continue, but Ms. Baker now engages Curtis and a few other children in picture sorting activities, where the task is to focus on the beginning consonant sound in spoken words. Curtis is able to sort the pictures by beginning sound and soon learns to match the various sounds to their corresponding alphabet letters. There is abundant practice in saying a word, identifying its beginning consonant sound, and then writing the letter that represents that sound.

After a set of three or four consonant letter/sounds (b, m, s, and r) have been mastered in the sorting context, Ms. Baker begins to hold Curtis responsible for these letter/sounds in contextual reading and writing activities. For example, when he hesitates in reading a word that begins with a b, the teacher points to the beginning consonant and urges Curtis to "sound" the first letter in the word. Analogously, when Curtis asks how to spell a word when he is labeling a completed drawing, Ms. Baker might say, "What's the first sound you hear in 'rocket'? Good, Curtis! You know how to make that letter." With the concentrated work on beginning consonant letter/sound relationships, Ms. Baker begins to notice a qualitative change in Curtis' reading behavior. He now finger-point reads familiar texts with accuracy, using a few known words (e.g., the, and, to, my) along with beginning consonant cues to guide his performance. Nonetheless, his sight vocabulary is still meager (fewer than 15 words) and even with several rereadings of a story Curtis has difficulty committing individual words to memory. His mental processing of word units in text might be diagrammed as follows:

I cxx rxxx my bxXx xx txxxXx
(I can ride my bike on trails.)

Stage 3: Word as an object in text with a discernible beginning and end. Weeks go by. In his writing, Curtis now represents beginning consonant sounds consistently.

M D K K F
(My dog can catch flies.)

Acknowledging the child's control of the beginning sound in words, Ms. Baker begins to probe for additional sounds:

"Curtis, you heard the first sound in 'dog' and put down a d. Say 'dog' slowly. What comes after the d? (Child says /g/.) Good Curtis! What letter should we put down?" (Curtis writes a g.). The same probe is repeated successfully with 'can' (again, Curtis perceives only the final sound), and then Ms. Baker moves on to another child.

At this point in the fall, Ms. Baker introduces word families or rhyming words in Curtis' small skill group (five children). By sorting one-syllable short vowel words into rhyming "families," the children not only strengthen their beginning consonant awareness but also learn to attend to other letter-sound properties in a word, specifically the ending consonant and the medial vowel.

<u>h</u> at	<u>m</u> an	<u>c</u> ap
cat	pan	lap
mat	ran	
	tap	

The short a word families, above, are worked with until the children gain a degree of mastery with the words. That is, through daily sorting, word games (e.g., Concentration, Bingo), and spelling checks, the children learn to read many of the short a words not just in column sorts but also in isolation. At this point, another set of word families is introduced

— for example, short i or short o families. [Note: The introduction, sequencing, and pacing of word family sorts are described in detail in Morris (1992).]

With teacher-supported reading and writing practice and developmentally appropriate word study activities, Curtis becomes a stronger reader. Although his sight vocabulary is still small (fewer than 40 words) and he continues to finger-point cautiously in text, Curtis can now attend consistently to the consonant boundaries of printed words. His print-processing skill has advanced once again:

I cxn rxdx my bxxkx on txxxls.
(I can ride my bike on trails.)

Stage 4: Word as an object in text with a beginning, middle, and end. In mid-November, Ms. Baker readministers the short spelling test (see Stage 1) to Curtis. He confidently represents beginning and ending consonants but shows little awareness of vowel sounds in words.

<u>Spelling word</u>	<u>Curtis' spelling</u>
back	BK
feet	FT
mail	ML
step	CTP
pick	PC
side	SD

Knowing the importance of vowel awareness in the beginning reading process, Ms. Baker continues the short vowel, word family sorts with Curtis' skill group. Notice how the following sort highlights the vowel element in the one-syllable words.

<u>cat</u>	<u>man</u>	<u>sit</u>	<u>big</u>
mat	fan	bit	wig
hat			
		hit	

After column-sorting and possibly a game to reinforce sight recognition of the individual words, the children take a spelling test on six of the words. They, then, self-correct their mistakes under Ms. Baker's guidance. Curtis spells four of the words correctly (hat, man, bit, and fan), but has to correct two misspellings (BAG for big; HAT for hit). Ms. Baker points out that the children must begin to listen carefully to the vowel sound in each word.

Ms. Baker also starts to call Curtis' attention to vowels in his journal writing:

I KT A CL FM MY SDR.
(I caught a cold from my sister.)

"Curtis, look at 'caught.' You put down the beginning and ending letters, but you left out the vowel letter. Say 'caught' — what do you hear after the /k/? (The child says /o/ like in 'bought.') OK, what letter should we put down . (Curtis changes his spelling from KT to KOT.) Good, that's a good choice. Now, let's look at your spelling of 'cold.' I think you can improve that one easily ..."

Curtis is developmentally ready for such instruction. His awareness of vowels in both reading and writing contexts is heightened, and Ms. Baker soon notices the results. For example, in reading, Curtis begins to acquire sight vocabulary at a faster rate; he is also more analytical and independent when attacking new words in a text. In writing, Curtis begins to

"sound through" words, representing both the consonant and vowel sounds in his spellings.

I CAN KEK A SIKR BOL.
 (I can kick a soccer ball.)
 SIKRS MY FAVRT SPOT.
 (Soccer's my favorite sport.)

Notice that at this stage Curtis' spelling of short vowel sounds is unconventional, with the letter name E substituting for short i in kick, and the letter name i substituting for short o in soccer. These substitutions are phonetically appropriate, however, and actually provide concrete evidence of Curtis' emerging grasp of the vowel element in spoken and written words (Beers and Henderson, 1977; Chomsky, 1979; and Read, 1971).

Vowel awareness is a critical step forward. Because Curtis can now perceive the sequential sounds or phonemes in a spoken word (e.g., /kik/ = /k/ /i/ /k/), his ability to process letter/sound relationships in printed words advances once again:

I can ridx my bikx on traxls.
 (I can ride my bike on trails).

Discussion

In the hypothetical case study above, Curtis' knowledge of printed words progressed through four stages:

- | | |
|----------|---|
| Stage 1: | Word as a nameable object in text.
(I xxx xxXx xx XxXx) |
| Stage 2: | Word as an object in text with a beginning element.
(I cxx rxXx my bxXx) |

- Stage 3: Word as an object in text with a discernible beginning and end.
(I cxn rxdx my bxlxx)
- Stage 4: Word as an object in text with a beginning, middle, and end.
(I can ridx my bikx)

This stage-like theoretical framework is neither new, nor revolutionary. Both psychologists who study reading processes (Ehri and Wilce, 1985; Perfetti, 1992; Stuart and Coltheart, 1988) and reading educators (Henderson, 1980; Holdaway, 1979; Morris, 1993) have proposed similar models. [See also the work on developmental spelling stages (Bear and Barone, 1989; Henderson and Templeton, 1986).] My purpose in this article has been to provide teachers who favor a holistic introduction to reading with a practical map or guide for observing their students' developing word knowledge.

Alphabet knowledge is critical in learning to read and write printed English (Adams, 1990). Assuming a minimal level of alphabet knowledge, a first step forward in learning to read is the development of a concept of word in text — learning how the spoken words match to the printed words (Stage 1). But note that even when the beginner is able to finger-point to individual words as he reads, what he sees (processes) on the page (Stages 1, 2, 3, and 4) is qualitatively different from what the mature reader sees. In fact, the beginning reader's underlying word concept must evolve through the stages (toward more and more mature processing) if his/her reading skills are to advance.

Some will argue that the four word knowledge stages are just another way of saying that phonological awareness (children's awareness of sounds within spoken words) is important in learning to read (Adams, 1990; Gough and

Hillinger, 1980; Liberman and Shankweiler, 1979). I am saying that. However, I am also saying that those teachers who use top-down, whole language approaches to introduce reading must assume responsibility for fostering their students' developing word knowledge. While two-thirds of the children in a first grade classroom may acquire such word knowledge quite naturally in their daily reading and writing of meaningful stories, the other third — the bottom third, Curtis' third — will likely require some direct assistance from the teacher.

In a classroom where writing is emphasized, invented spellings will offer the teacher direct and ongoing insight into individual children's developing awareness of sounds within words (bike = B, BK, or BIC). The teacher can also use writing (or spelling) as a means of advancing an individual child's phoneme awareness (see intervention examples in Stages 2, 3, and 4).

In the present article, the teacher (Ms. Baker) used simple categorization activities with one-syllable words to help her students develop sound awareness and letter/sound knowledge. Importantly, these activities (beginning consonant and word family sorts) were carefully paced to the children's underlying level of word knowledge. However unfashionable such instruction may be in this current period of whole language influence, the fact remains that it works. Focused word study can facilitate beginning readers' emerging knowledge of word structure (Invernizzi, Abouzeid, and Gill, 1994).

Today, many kindergarten and first grade teachers believe strongly in a whole language introduction to reading, including the group reading and rereading of rhymes, chants, and captivating stories. The advantages of such an approach are not to be denied. Still, the successful whole language

teacher, the one who reaches all children in the class, will be a teacher who carefully monitors and facilitates individual students' developing knowledge of printed words. Perhaps the late-Edmund Henderson, a thoughtful proponent of the language-experience approach who was not averse to teaching beginning readers about words, put it best (1980, p. 2):

We contend that an understanding of what children know about words is crucial for effective instruction in reading and writing. Children do, of course, learn letters and words directly from exposure to written language. But what they can learn — indeed, even what they can see on the page — depends upon the conceptual frame they bring to the task. Where instruction is paced to the child's underlying conceptual grasp, almost any methodology is likely to succeed. Where this state of mind is violated or overreached, almost any method is likely to fail and lead to difficulty ...

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